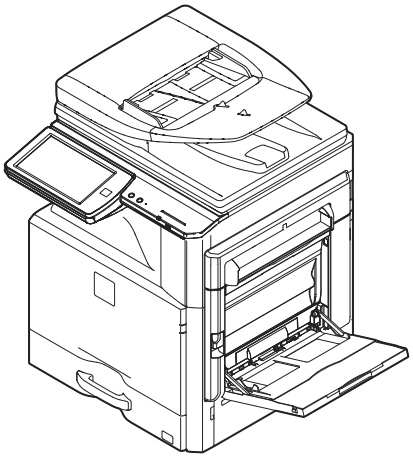
SHARP INSTALLATION MANUAL

DIGITAL FULL COLOR MULTIFUNCTIONAL SYSTEM

MODEL MX-2640N MX-3140N MX-3640N



Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

Transit, Installation (using) environment, Note

1. Installing (use) conditions

Before installing the machine, check that th e following inst alling (use) conditions are satisfied.

If the installing (use) conditions are not satisfied, the machine may not display full performances, resulting in troubles. It may also cause safety problems. Therefore, be sure to arrange the installing (use) conditions before setting up the machine.

No.	Content
1	Transportation space
2	Installing space
3	Power source (Capacity, fluctuation, safety)
4	Floor strength
5	Direct rays of the sun, dust, temperature, humidity, gases, chemicals

A. Transportation space

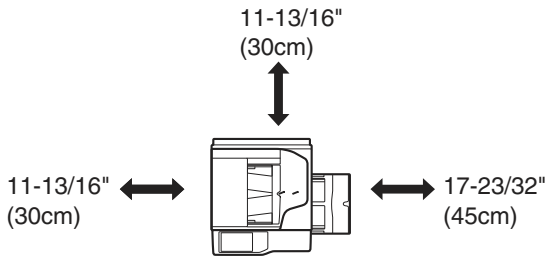
For installation of a large size machine, be sur e to check that the door size is wide enough before bringing in.

B. Installing space

The following space must be provided around the machine in order to assure machine performances and proper operations.

If any option is installed, provide the additional space for installing it.

Adequate space must be provide behind the machine for proper ventilation heat and dust. If not, the machin e cannot exhibit functions against heat and dust, causing some troubles.



C. Power source (Capacity, voltage, frequency, safety, plug)

If the power specif ications are not satisfied, the machine cannot exhibit full performances and may cause safety trouble.

Strictly observe the following specifications.

(1) Power capacity

Check that the following power capacity is satisfied. If not, additionally provide a power source.

Current capacity

Japan: 20A or more

EX 100V: 15A or more

EX 200V: 10A or more

Important

Check the shape of the power plug of the machine, and insert it into a power outlet of the acceptable shape.

(2) Power voltage

Measure the voltage during copying to check that the voltage is in the range of the specified voltage ±10%.

If the voltage is outside the specified range, please have a certified electrician upgrade the outlet.

(An electrical work is required.)

Use of a step -up transformer is also available. In this case, the capacity must be great enough for the max. power consumption of the machine.

(3) Power frequency, waveform

The frequency must be within the range of the specified frequency ±2%. If power waveform is deformed, a trouble may occur.

(4) Safety

Be sure to properly ground the machine.

Grounding (earth connection) must be performed before inserting the power plug into the power outlet.

When disconnecting the ear th connection, be sure to disconnect the power plug from the power outlet in advance.

(5) Power plug

Check the shape of the power plug of the machine, and insert it into a power outlet of the acceptable shape.
Power plug stated in power capacity.

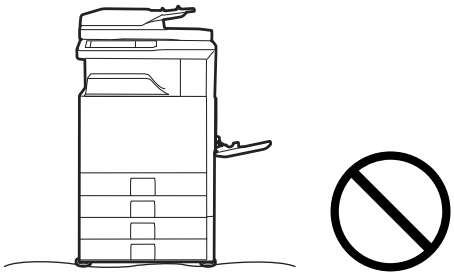
D. Floor strength and level

This machine is considerably heavy and becomes heavier with an option installed.

The floor must be strong enough to safely support the weight of the machine as well as any installed options.

If the unit is not horizontally installed, the toner density control is not performed normally, degrading the copy quality.

If not, color shift or image distortion may occur.
To assure proper Image quality, make sure the machine is setting level.



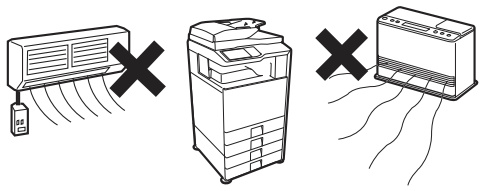
E. Direct rays of the sun, dust, temperature, humidity, gasses, chemicals, vibration

(1) Temperature and humidity (Environmental conditions)

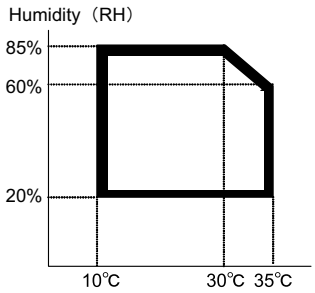
This machine is designed to per form properly under the specified temperature and humidity. If the temperature and humidity exceeds the specified range, the machine may not operate properly and or cause equipment failure.

Especially when the humidity is too high, paper absorbs humidity to cause a paper jam or dirty copy.

Do not install the machine near a heater, a cooler, or a humidifier.



Condensation may form inside the machine ca using multiple troubles. Use enough care for ventilation.



Operational environment

Temperature: 10 to 35°C

Humidity: 20 to 85% RH

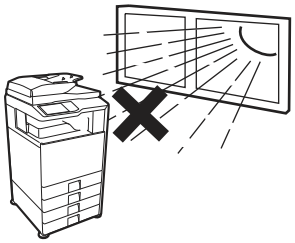
Atmospheric pressure: 590 to 1013hPa (altitude: 0 to 2000 m)

(2) Contaminates

If dust enters the machine, it may cause dirty copy and a paper jam, resulting in a shortened lifetime.

(3) Direct sunlight

If the machine is installed under the rays of the sun, the exterior of the machine may be discolored and abnormal copies may be produced.



(4) Gases and chemicals

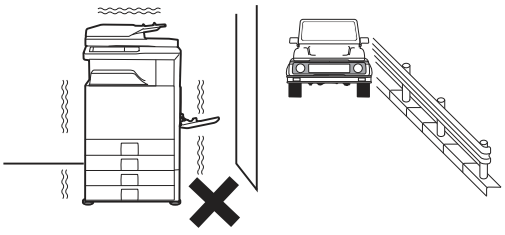
Do not install the machine at a place where there are gases and chemicals. Especially be careful to avoid installation near a diazo-type copier, which produces ammonium gas.

Copy quality may be adversely affected and a trouble may be caused.

(5) Vibration

Avoid installation near a machine which produces vibrations.

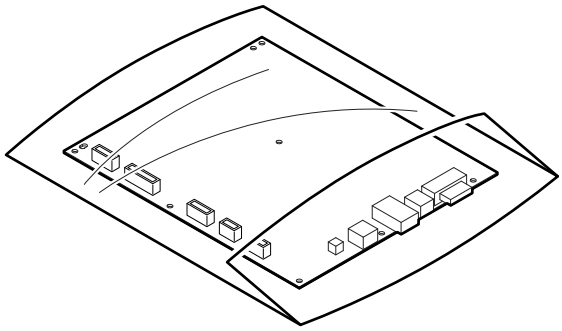
If vibrations are applied to the copier machine, copy images may be deflected and a trouble may be caused.



F. Note for handling PWB and electronic parts

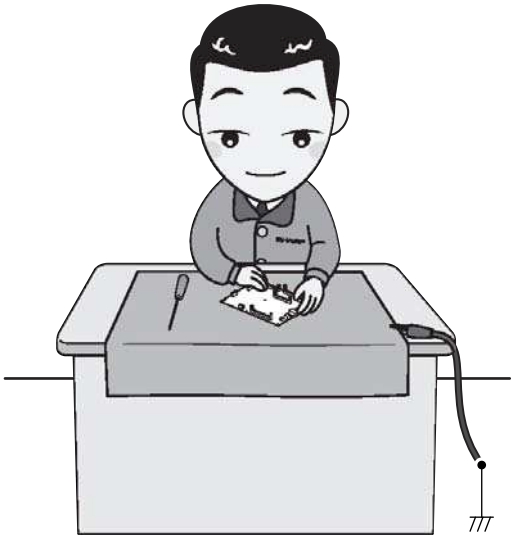
When handling the PWB and the electronic parts, be sure to observe the following precautions in order to prevent against damage by static electricity.

- When in transit or storing, put the parts in an anti-static bag or an anti-static case and do not touch them with bare hands.



- When and after removing the parts from an anti-static bag (case), use an earth band as shown below:
  - Put an earth band to your arm, and connect it to the machine.

- When repairing or replacing an electronic part, perform the procedure on an anti-static mat.



G. Note for proper drum, developing, fusing and transfer unit handling

When handling the OPC drum, developing and transfer unit s, observe the following items.

Drum unit

- To prevent damage to the OPC drum, avoid working on the drum unit in high intensity light areas.
- When the OPC drum is removed from the machine, cover it with light blocking material. (When using paper, use about 10 sheets of paper to cover it.)
- Be careful not to attach fingerprints, oil, grease, or other foreign material on the OPC drum surface.

Transfer unit

- Be careful not to "leave" fingerprints, oil, grease, or other foreign material on the transfer roller, primary transfer belt and secondary transfer belt.

Developing unit

- Be careful not to "leave" fingerprints, oil, grease, or other foreign material on the developing unit.

Fusing unit

- Be careful not to "leave" fingerprints, oil, grease, or other foreign material on the fusing roller and the external heating belt.
- Do not leave the fusing roller in contact state for a long time.

If these items are neglected, a trouble may be generated in the copy and print image quality.

2. Transit and delivery

No.	Content	Method
1	Implements, facility, and man power	Use a forklift. (If no forklift is available, manpower of two persons is required.)
2	Delivery	Transit must be made in packed condition.

A. Implements, facility, and manpower

It is recommendable to use a forklift for bringing in the machine for safety.

If no forklift is available, man-power of two persons is required. The machine is considerably heavy, and requires safety precautions for delivery and installation.

Transit of the machine must be made in packed condition to the installing place.

Since the hard disk drive is built in the machine, use care not to exert vibrations or shocks to the machine when in transit.

B. Delivery

Remove the packing materials prior to installation in the office environment.

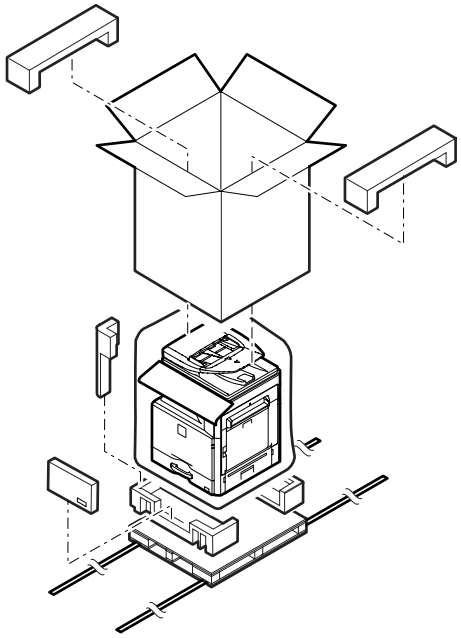
3. Relationship between the model name and the designation in description of the document

Model name	Designation in description
MX-2640N	26cpm machine
MX-3140N	31cpm machine
MX-3640N	36cpm machine

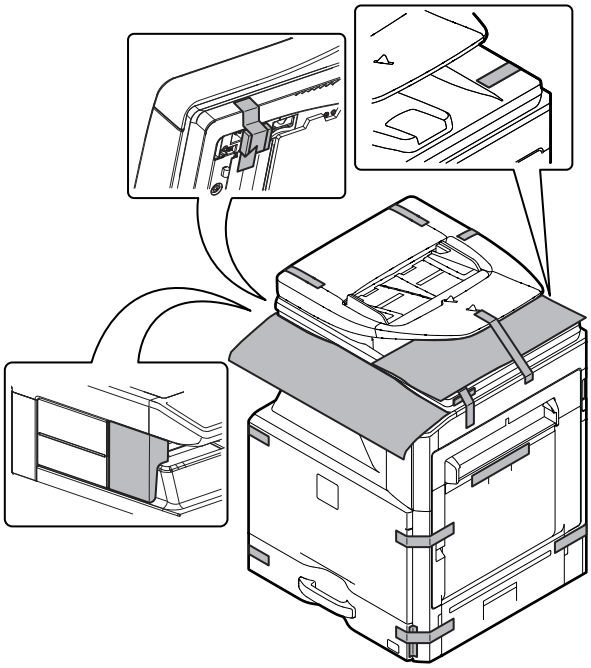
[2] MX-2640N/3140N/3640N (MAIN UNIT)

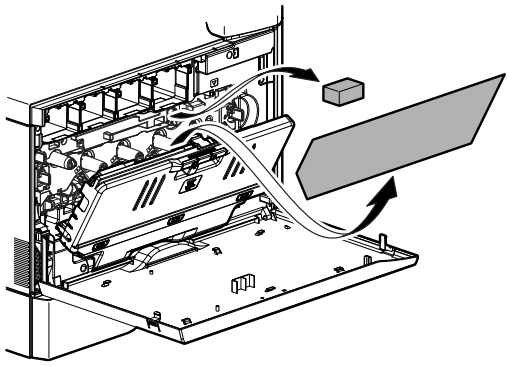
1. Unpacking

A. Unpacking

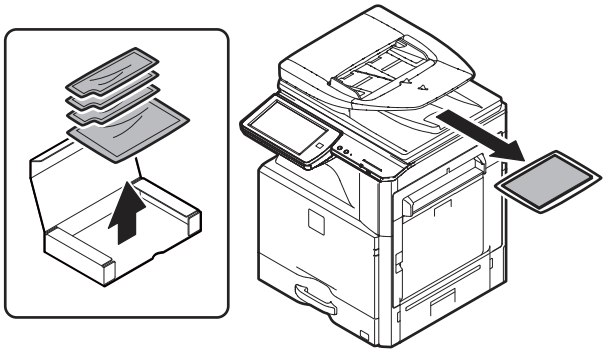


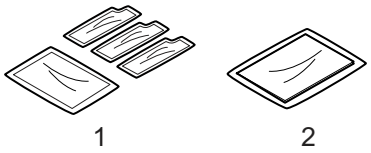
B. Fixing tape and protection material removal





C. Packed items check





1 2

No.	Name	Quantity
1	Developer	4
2	Operation manual	1

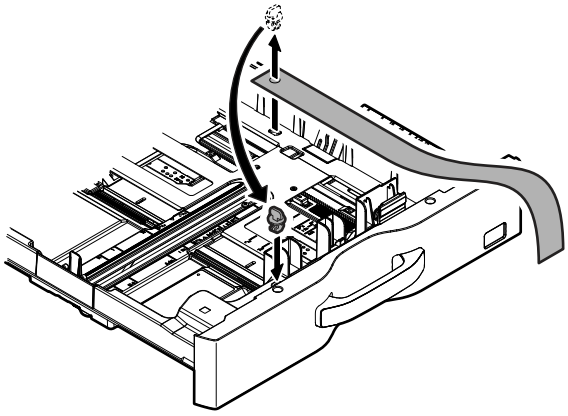
Yes: Developer is included with shipment.

No: Developer is not included with shipment.

D. Lock release

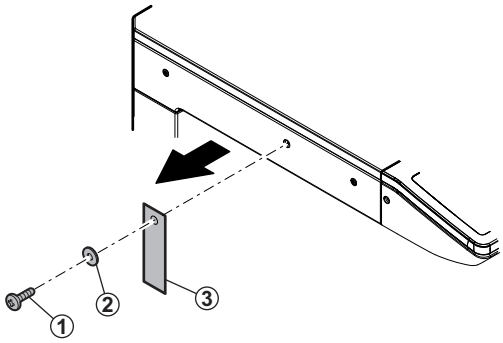
(1) Tray rotation plate lock release

1) Pull out the tray . Turn the fixing material and remove it.
Remove the caution label.
Attach the removed fixing material to the position shown in the figure for future use.
Close the tray which was pulled out.



(2) Scanner (2/3 mirror unit) lock release

1) Remove the optical unit fixing screw, and remove the note label.



2. Installation

Important

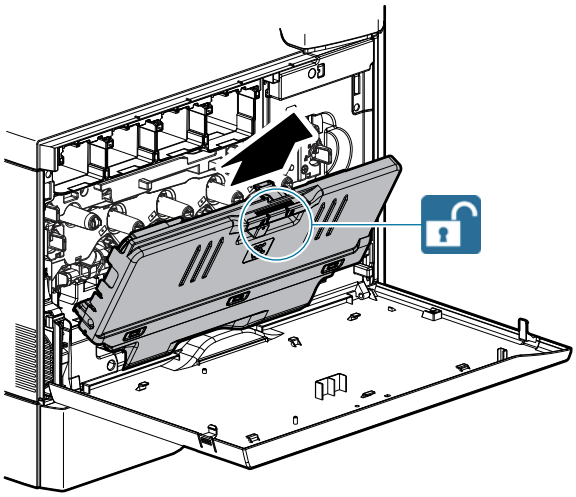
When an optional paper feed desk is connected to the machine, unpack and install the paper feed desk, then unpack the machine. Place the machine on the option desk securely, and perform the installing procedures of the machine.
Place the machine on the optional desk firmly and secure.

A. Developer installation

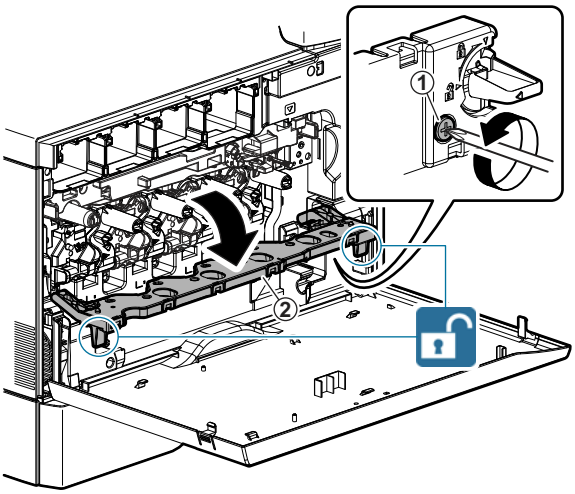
Important

Be careful not to leave fingerprints or oily dirt on the DV roller surface.

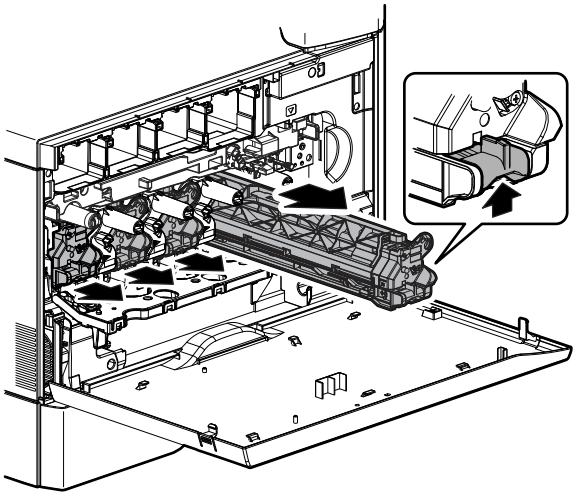
1) Open the front cabinet. Slide the lock to release, and remove the waste toner box.



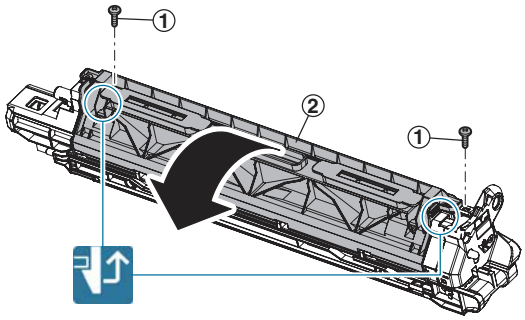
2) Turn the drum cover securing locks (2) to release, and then raise the drum positioning cover.



3) While pressing the lever, pull out the developing unit to remove.



4) Open the cover to remove.



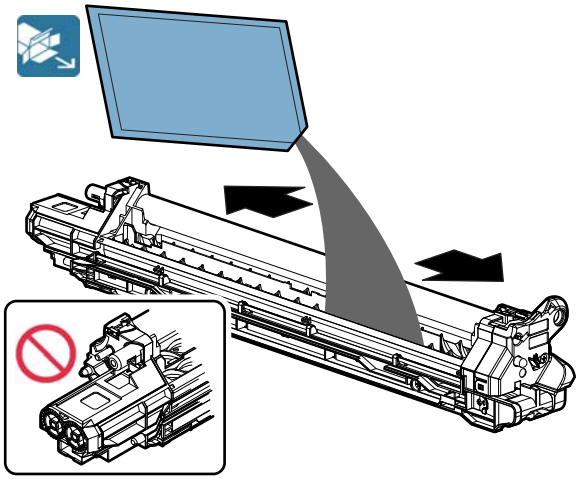
5) Loading developer to the developing units.

Important

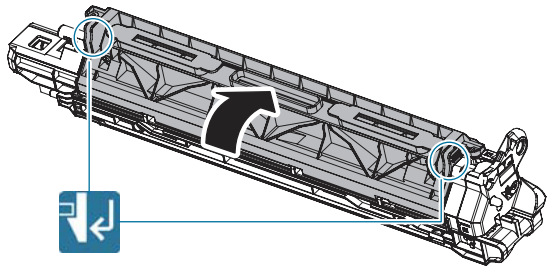
Be sure to shake the bag of developer thoroughly before pouring into the developing unit.

Important

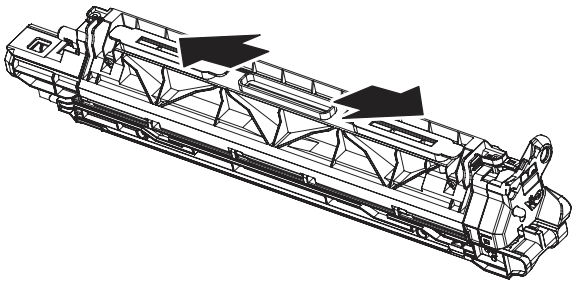
When pouring the developer into the unit, use care t o not get developer in to the drive section.



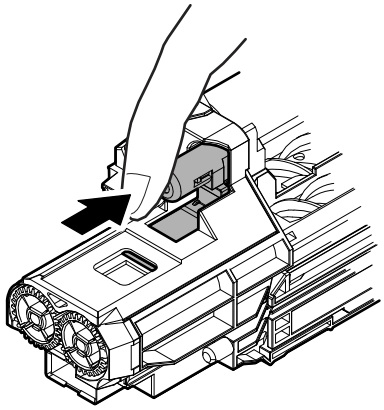
6) Attach the cover.



7) Shake the developing unit se veral times horizont ally and strongly.



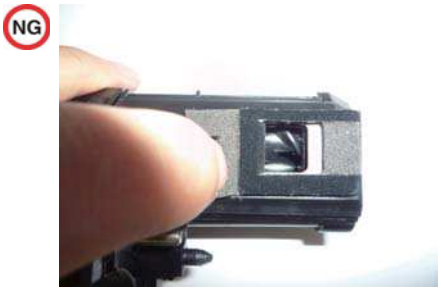
8) Open the toner shutter of the developing unit and ch eck to confirm that there is proper amount of developer. If not, per - form procedure 7) again.



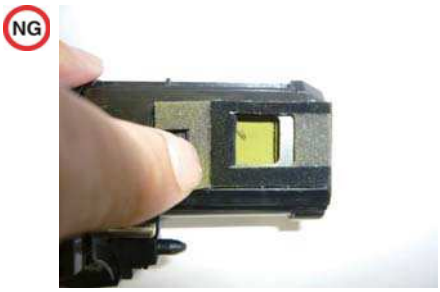
- Check that there is proper amount of developer. (The stirring screw can be partly seen.)

OK

- There is no developer in the shutter position.



- There is too much developer.
  (The stirring screw cannot be seen.)



Important

Be sure to keep the developing unit level while supplying the developer.

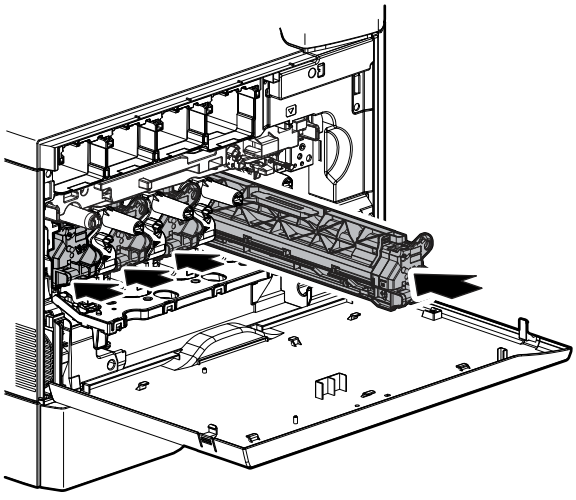
9) Insert the developing unit so as not to give a strong shock to the main unit gently.

Important

Slide the developing unit horizontally into the machine, in the direction of the arrow, until developing unit locks into. place. Do not push the unit diagonally, as contact with the drum may occur causing damage.

Important

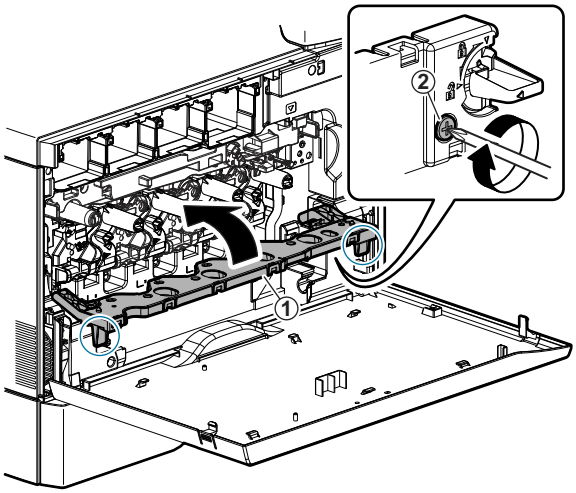
When removing or installing the developing unit, put your hand from below the unit and slide it in parallel along the guide.
At that time, be careful not to touch the roller surface.



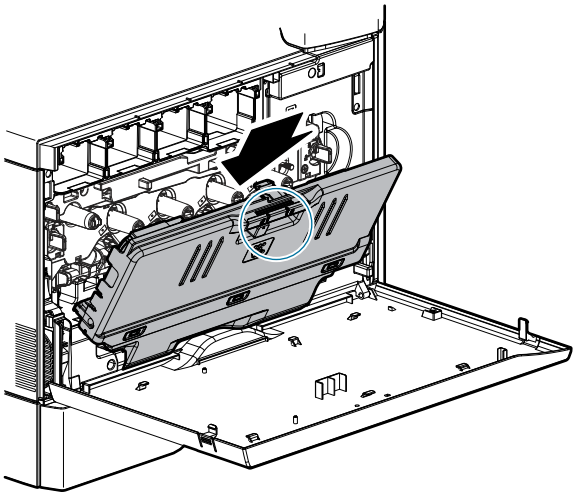
Important

When installing the machine, there is no need to remove or install the OPC drum unit. If it must be removed or installed for any reason, follow the procedures below. When removing or installing the OPC drum unit, put your hand from below the unit and slide it in parallel along the guide on the right side.
At that time, be careful not to touch the OPC drum surface.

10) Close the drum positioning cover, and lock it.



11) Re-install the waste toner box and lock into place.



B. Set the control level for the reference toner density

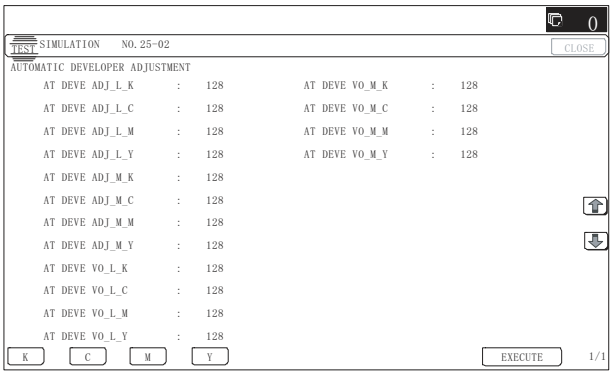
Important

Setting of the reference toner density control level must be performed with the toner cartridge removed.

If setting is performed with the toner cartridge installed, the EE-EL error or an overtoner trouble may occur.

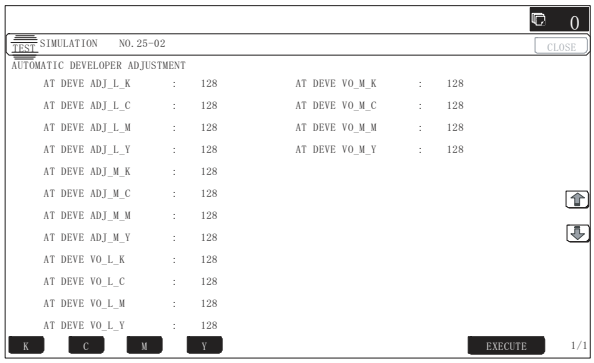
1) With the front cabinet open, connect the power plug to the power outlet.
2) Turn ON the main power switch of the machine and the power switch on the operation panel.

3) Enter the SIM25-2 mode.



4) After entering the simulation, close the front cabinet.

5) Select K, C, M, Y and then press the [EXECUTE] button. The system then performs the simulation, samples the toner density control sensor value, and sets (stores in memory) the average sensor detection level as the control level for the reference toner density. (Operating times: approx. 1.5 minutes)



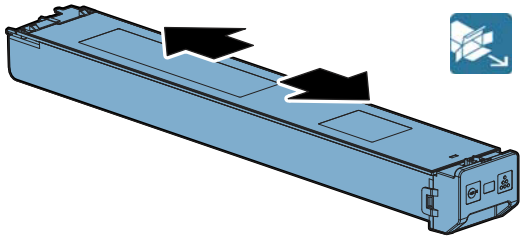
Note

Be sure to select all of the four colors: K, C, M, Y.

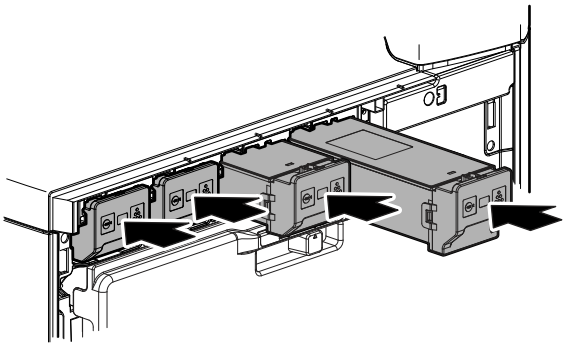
6) After the machine completes cycling, exit the simulation mode.

7) Confirm that “Install the toner cartridge” is displayed, and install the toner cartridge by the following procedures.

8) Shake the toner cartridge horizontally several times.



9) Open the front cabinet, and insert each toner cartridge.



Important

Be sure to install the color cartridges to their proper positions. Avoid installation to a different color position.

Important

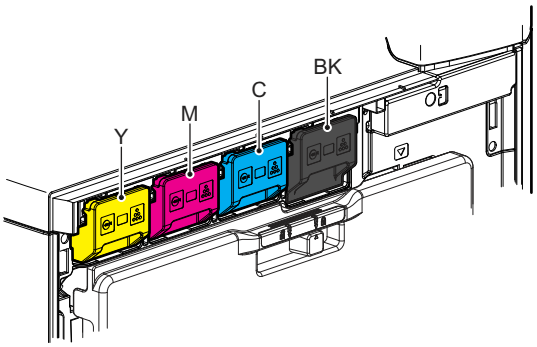
Do not forcibly insert the toner cartridge.

Push it in until the cartridge is securely locked in place.

Important

Developing units removed, be sure to remove the toner cartridges as well to prevent toner clogging.

Color toner cartridge positions



10) Close the front cabinet.

11) Confirm that "Toner replenishment in progress" is displayed, and wait until the display disappears. (It takes 30 sec - 6 min.)

Note

This procedure is for checking the toner supply operation from the toner cartridge to the DV unit. The operation time differs depending on the toner quantity in the toner cartridge, uneven distribution of toner, and the inside state of the toner cartridge.

Important

Do not perform operations which interrupt the above operation, such as opening the front cover, entering the SIM mode, and turning OFF/ON the power. If this precaution is ignored, an error of F2-40 - 43 or F2-64 - 67 may occur or an overtoner may be caused.

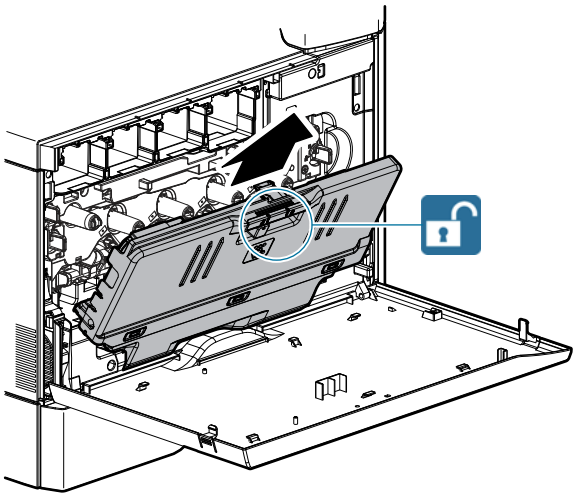
C. Cleaning

(1) Cleaning of LSU's dust-proof glass and PTC wire

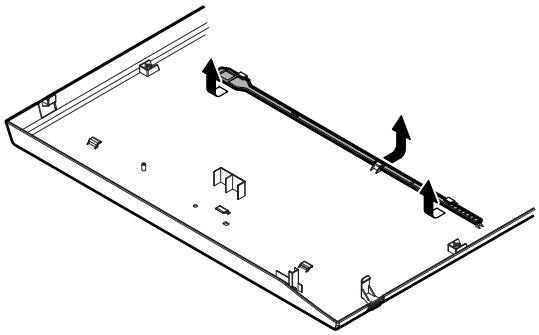
Important

Dust from the transfer belt or sh utter or some other adjacent p art may fall onto the LSU during tr ansport or installation. Be sure to clean the dust-proof glass and PTC wire before checking the image quality.

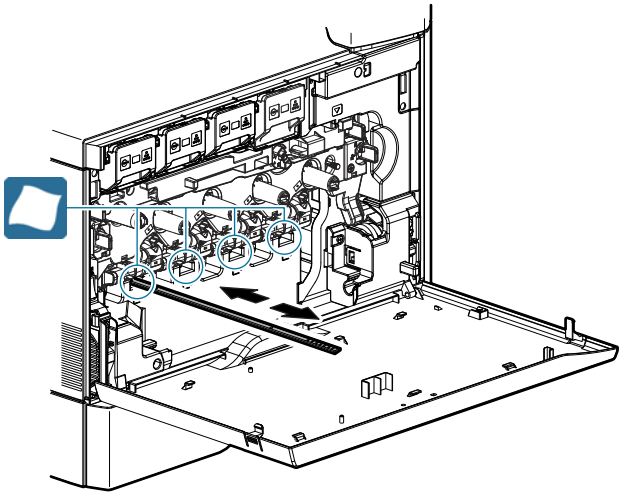
1) Open the front cabinet. Slide the lock to release, and remove the waste toner box.



2) Detach the LSU cleaning bar from the front cover.



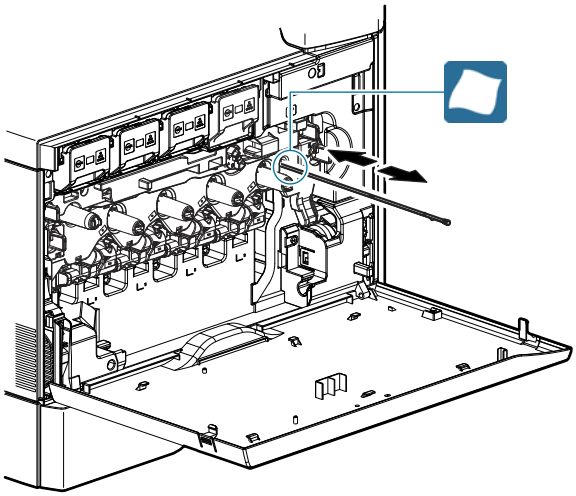
3) Turn the felt side of the clean ing bar downward and insert it. Slide it back and forth a few times to clean the LSU dust-proof glass.



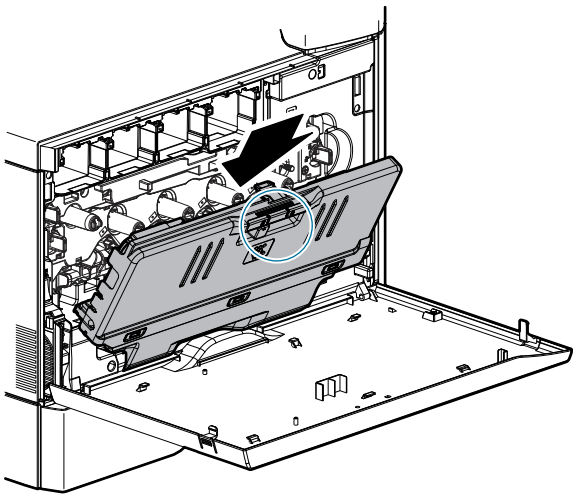
4) Move the PTC cleaning rod back and forth a few times to clean the PTC wire.

Important

After completion of cleaning, insert the cleaning rod completely to the bottom.



5) Return the LSU cleaning rod to the front cabinet so that the felt faces upward. Fit the boss, and fix it with three pawls.



6) Close the front cabinet.

D. Paper feed tray setup

(1) System setting

1) Press the [SYSTEM SETTINGS] key.
2) Touch the [Paper Tray Settings] key.
3) Touch the [Paper Tray Settings] key to configure the settings. These settings specify the paper type, p aper size, and functions allowed for each paper tray. When the [Tray Settings] key is touched, a list appears showing the trays and the current settings.

4) Touch the [Change] key in the above screen to change the settings. The following settings can be configured.

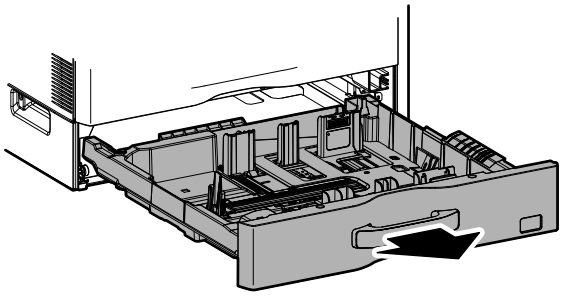
Item	Description
Type	Select the type of paper that is loaded in the tray. The paper types that can be selected vary by paper tray.
Size	Select the paper size from the list. The paper sizes that can be selected vary by tray. The sizes that can be selected may also be restricted by the paper type selected above. If the desired size does not appear in the list, select [Custom Size] and directly enter the size (only for the bypass tray).
Feeding Approved Job	Select the modes that can be used. If there is a function that you do not wish to be used with the selected tray, disable the function. When the "Type" is other than plain paper, recycled paper, colored paper, or a user type, [Fax] and [Internet Fax] cannot be selected.

(2) Tray size setup

1) Pull out the paper tray.

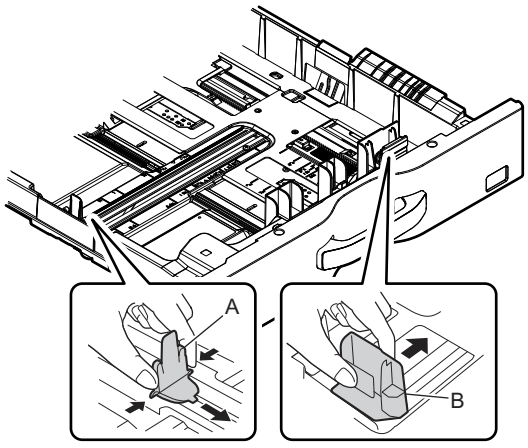
Gently pull the tray out until it stops.

If paper remains in the tray, remove it.



2) Adjust the guide plates A and B by squeezing their lock levers and sliding them to match the vertical and horizontal dimensions of the paper to be loaded.

The guide plates A and B are slidable. Slide each guide plate while squeezing its lock lever.



E. Specifications setup

Use simulation 26-6 to set the machines destination.

SIM No		Content
26	6	Used to set the destination.

After completion of destination settings, change the set values to customize the following settings.

SIM No		Content
26	3	Used to set the auditor specification mode.
	5	Used to set the count mode of the total counter and the maintenance counter.
	18	Used to set YES/NO of the toner save mode (Only in UK and Japan versions) * For other destination versions, this setup is made by the user program.
	52	Used to set YES/NO of counting when non-print paper is passed through each counter.
	53	Used to set YES/NO of user calibration permission.
	65	Used to set the limit number of sheets for stapling.

3. Image quality check

A. Execution items

Execute the following items.

No.	Item	SIM
1	Print engine image distortion adjustment (Manual adjustment) / OPC drum phase adjustment (Automatic adjustment) / Color registration adjustment (Automatic adjustment)	50-22
2	Copy color balance and density check	
3	Printer color balance/density check	64-5/67-25
4 *1	Copy/Printer color balance and density adjustment (Automatic adjustment)	46-74

Important

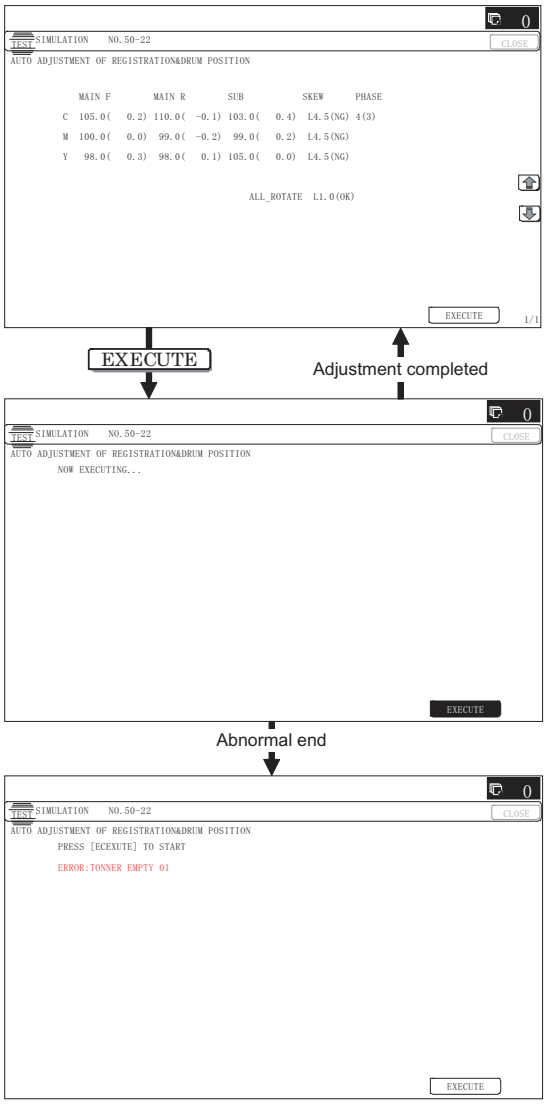
*1: When a printer option is installed, be sure to execute the above item.

B. Description

(1) Print engine image distortion adjustment (Manual adjustment) / OPC drum phase adjustment (Automatic adjustment) / Color registration adjustment (Automatic adjustment)

This adjustment performs the print engine image distor tion adjustment, the OPC drum phase adjustment, and the color registration adjustment simultaneously.

1) Enter SIM50-22 mode.

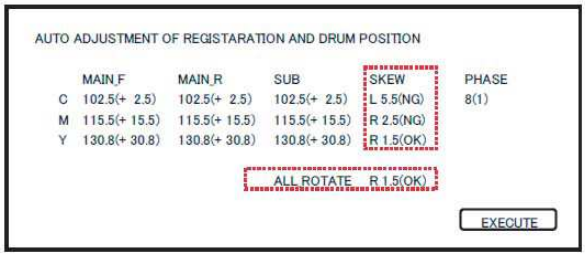


2) Press [EXECUTE] key.

[EXECUTE] key is highlighted and the image registration automatic adjustment is started. (It takes about 15 sec to complete the adjustment.)

3) When the adjustment is completed, [EXECUTE] key returns to the normal display, and the value of the adjustment result is displayed.

The current skew level for each color is displayed on the SKEW display section.


AUTO ADJUSTMENT OF REGISTARATION AND DRUM POSITION
MAIN_F
MAIN_R
SUB
SKEW
PHASE
C 102.5(+ 2.5) 102.5(+ 2.5) 102.5(+ 2.5) L 5.5(NG) 8(1)
M 115.5(+ 15.5) 115.5(+ 15.5) 115.5(+ 15.5) R 2.5(NG)
Y 130.8(+ 30.8) 130.8(+ 30.8) 130.8(+ 30.8) R 1.5(OK)
ALL ROTATE R 1.5(OK)
EXECUTE

Display/ Item	Content		Display	Default	NOTE
MAIN F	C	Registration adjustment value main scanning direction (Cyan laser writing position F side)	1.0 - 199.0	100	
	M	Registration adjustment value main scanning direction (Magenta laser writing position F side)	1.0 - 199.0	100	
	Y	Registration adjustment value main scanning direction (Yellow laser writing position F side)	1.0 - 199.0	100	
MAIN R	C	Registration adjustment value main scanning direction (Cyan laser writing position R side)	1.0 - 199.0	100	
	M	Registration adjustment value main scanning direction (Magenta laser writing position R side)	1.0 - 199.0	100	
	Y	Registration adjustment value main scanning direction (Yellow laser writing position R side)	1.0 - 199.0	100	
SUB	C	Registration adjustment value sub scanning direction (Cyan drum → Black drum)	1.0 - 199.0	100	
	M	Registration adjustment value sub scanning direction (Magenta drum → Black drum)	1.0 - 199.0	100	
	Y	Registration adjustment value sub scanning direction (Yellow drum → Black drum)	1.0 - 199.0	100	
SKEW	C	Print skew amount calculation result (Cyan)	-99.9 - 99.9	0	If the value is positive (+), "L" is displayed at the head of the value. If negative (–), "R" is displayed. If the value is in the range of –2.1 - +2.1, "(OK)" is displayed at the bottom of the value. In the other cases, "(NG)" is displayed.
	M	Print skew amount calculation result (Magenta)	-99.9 - 99.9	0	
	Y	Print skew amount calculation result (Yellow)	-99.9 - 99.9	0	
ALL_ ROTATE	Print skew amount calculation result (Overall)		-99.9 - 99.9	0	If the value is positive (+), "L" is displayed at the head of the value. If negative (–), "R" is displayed. If the value is in the range of –1.6 - +1.6, "(OK)" is displayed at the bottom of the value. In the other cases, "(NG)" is displayed.
PHASE	OPC drum phase adjustment value		1 - 8	1	

4) Write down the displayed skew level.
(Meaning of the skew level value and the adjustment procedure)

* If "OK" is displayed for all items of SKEW ALL_ROTATE, C, M, and Y, there is no need to perform the adjustment.
* When "R" is displayed at the head of the value, turn the LSU skew adjustment screw clockwise.
* When "L" is displayed at the head of the value, turn the LSU skew adjustment screw counterclockwise.
* The turning amount of the adjustment screw corresponds to each adjustment value. "ALL_ROTATE" indicates the number of rotations, and C, M, and Y indicate numbers of clicks.
  The display value is rounded at the decimal point.
* "ALL_ROTATES" shows the number of rotations of adjustments for all the adjustment screws. "C, M, and Y(SKEW)" shows the number of adjustment click steps for each adjustment screw of C, M, and Y.

Contents in ( )

MIAN, SUB: Difference from the previous adjustment value of image registration.

Example:

If 105 for this time and 103 for the previous time, it is displayed as 105.0 (+2.0).

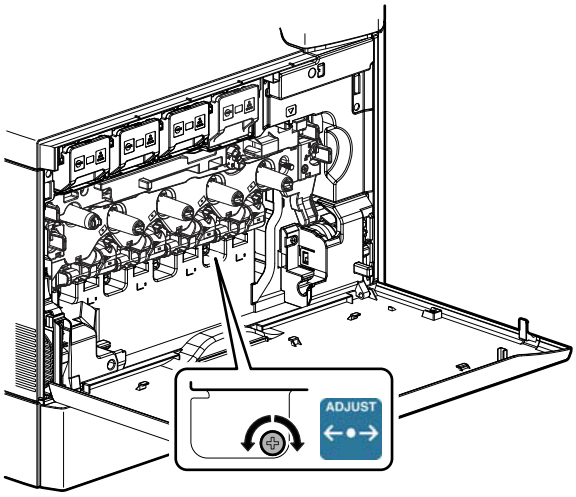
SKEW, ALL_ROTATE: Judgment of the LSU skew adjustment result. OK or NG.

PHASE: OPC drum phase adjustment value of the previous time

5) If the display of ALL_ROTATE is NG, turn all the LSU skew adjustment screws to adjust, and perform the procedures 2) to 4).

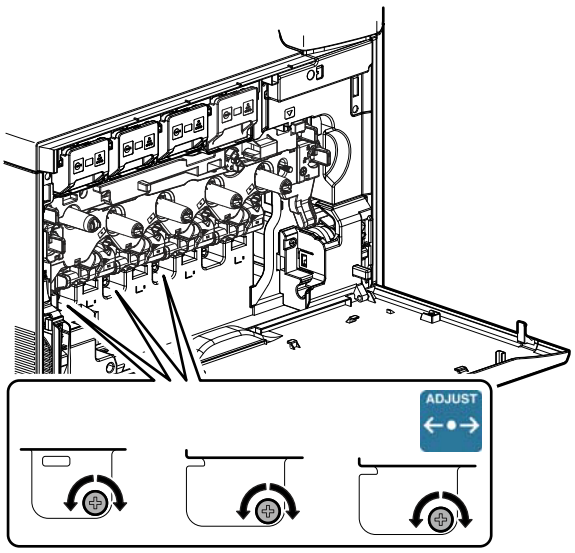
Repeat the procedures 2) to 5) until the display of ALL_ROTATE becomes OK. If the display of ALL_ROTATE is OK, go to the procedure 6).

For the adjustment, remove the front cover and the waste toner box, and turn the skew adjustment screw.



6) Repeat the procedures 2) to 4) again, and check to confirm that C, M, and Y (SKEW) are OK.

If any of them is NG, turn the LSU skew adjustment screw of the corresponding color to adjust.



Important

When the adjustment is made by turning the LSU skew adjustment screw of K, the states of C, M and Y (SKEW) are changed. Execute SIM50-22 to check to confirm that C, M, and Y (SKEW) are OK.

When an abnormality occurs, "ERROR" is displayed.

In this case, check each drive section and the process section.

(2) Copy color balance and density check

Note

Before checking the copy color balance and density, be sure to execute the following jobs.

* Execute the high density image correction (Process correction) forcibly. (SIM 44-6)
* Execute the half-tone image correction forcibly. (SIM 44-26)

Method 1

Make a copy of the gray test chart (UKOG-0162FCZZ) and a copy of the servicing color test chart (UKOG-0326FCZZ/UKOG-0326FC11), and check that they are proper.

a. Note for execution of the color balance and density check in the color copy mode

To check the copy color balance and density, use the gray test chart (UKOG-0162FCZZ) and the servicing color test chart (UKOG-0326FCZZ/UKOG-0326FC11). Set the copy density level to "3" in the Text/Printed Photo mode (Manual), and make a copy.

At that time, all the color balance adjustments in the user adjustment mode must be set to the default (center).

In addition, be sure to use the specified paper for color.

b. Note for checking the monochrome copy mode density

To check the density, use the gray test chart (UKOG-0162FCZZ). Set the copy density level to "Manual 3" in the Text/Printed Photo mode (Manual).

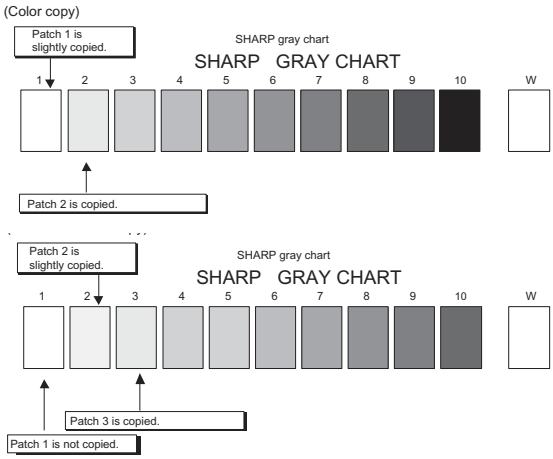
In addition, all the color balance adjustments in the user adjustment mode must be set to the default (center).

[Check with the gray test chart (UKOG-0162FCZZ)]

In the copy density check with the gray test chart, check to insure the following conditions.

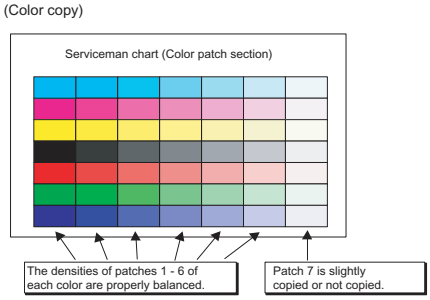
Important

For the color (gray) balance, use the servicing color test chart (UKOG-0326FCZZ/UKOG-0326FC11) to check.


(Color copy)
Patch 1 is slightly copied.
SHARP gray chart
SHARP GRAY CHART
1 2 3 4 5 6 7 8 9 10 W
Patch 2 is copied.
Patch 2 is slightly copied.
SHARP gray chart
SHARP GRAY CHART
1 2 3 4 5 6 7 8 9 10 W
Patch 3 is copied.
Patch 1 is not copied.

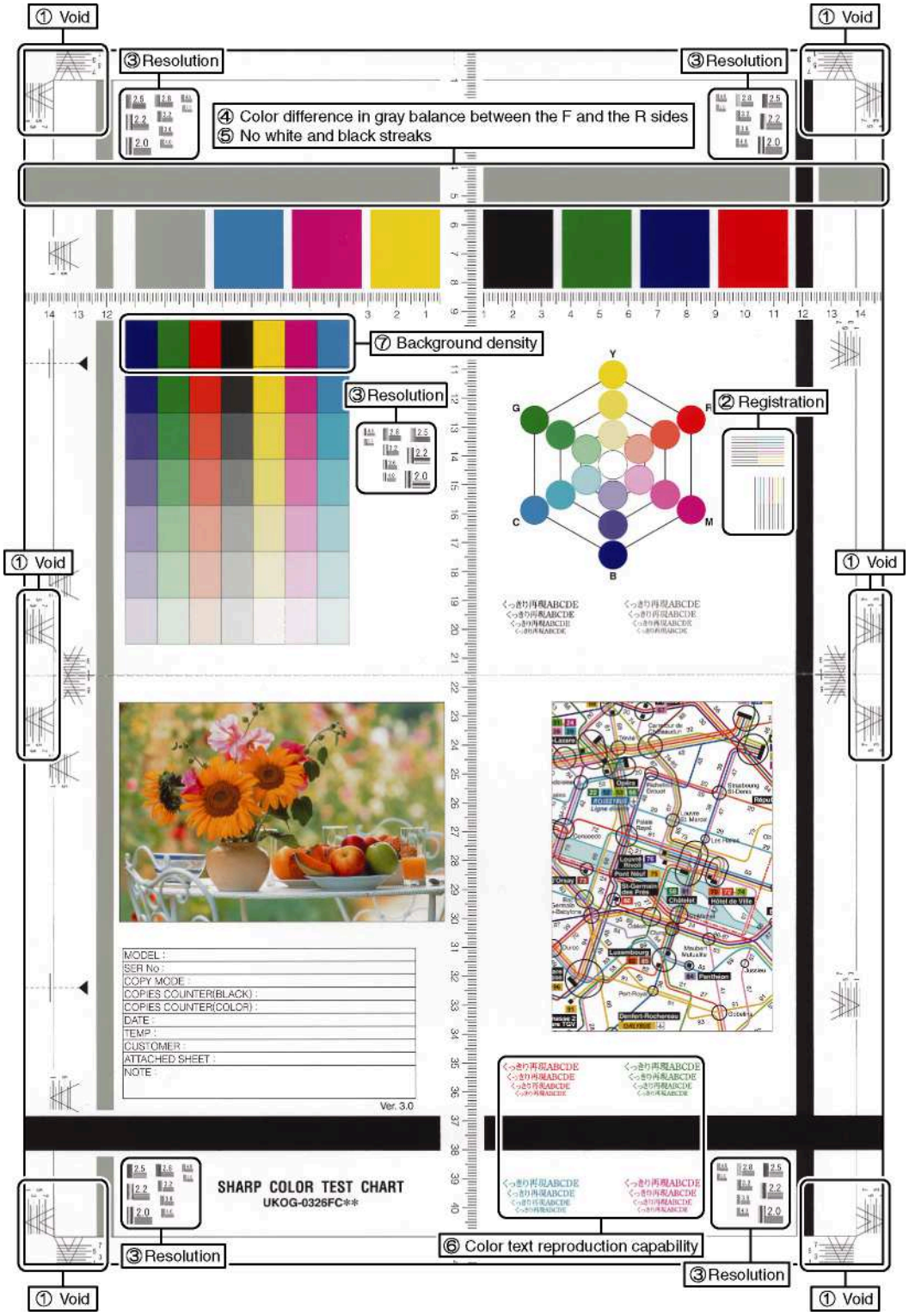
[Check with the servicing color test chart (UKOG-0326FCZZ/UKOG-0326FC11)]

In the copy color balance check with the servicing color test chart, check to insure the following conditions.


(Color copy)
Serviceman chart (Color patch section)
The densities of patches 1 - 6 of each color are properly balanced.
Patch 7 is slightly copied or not copied.

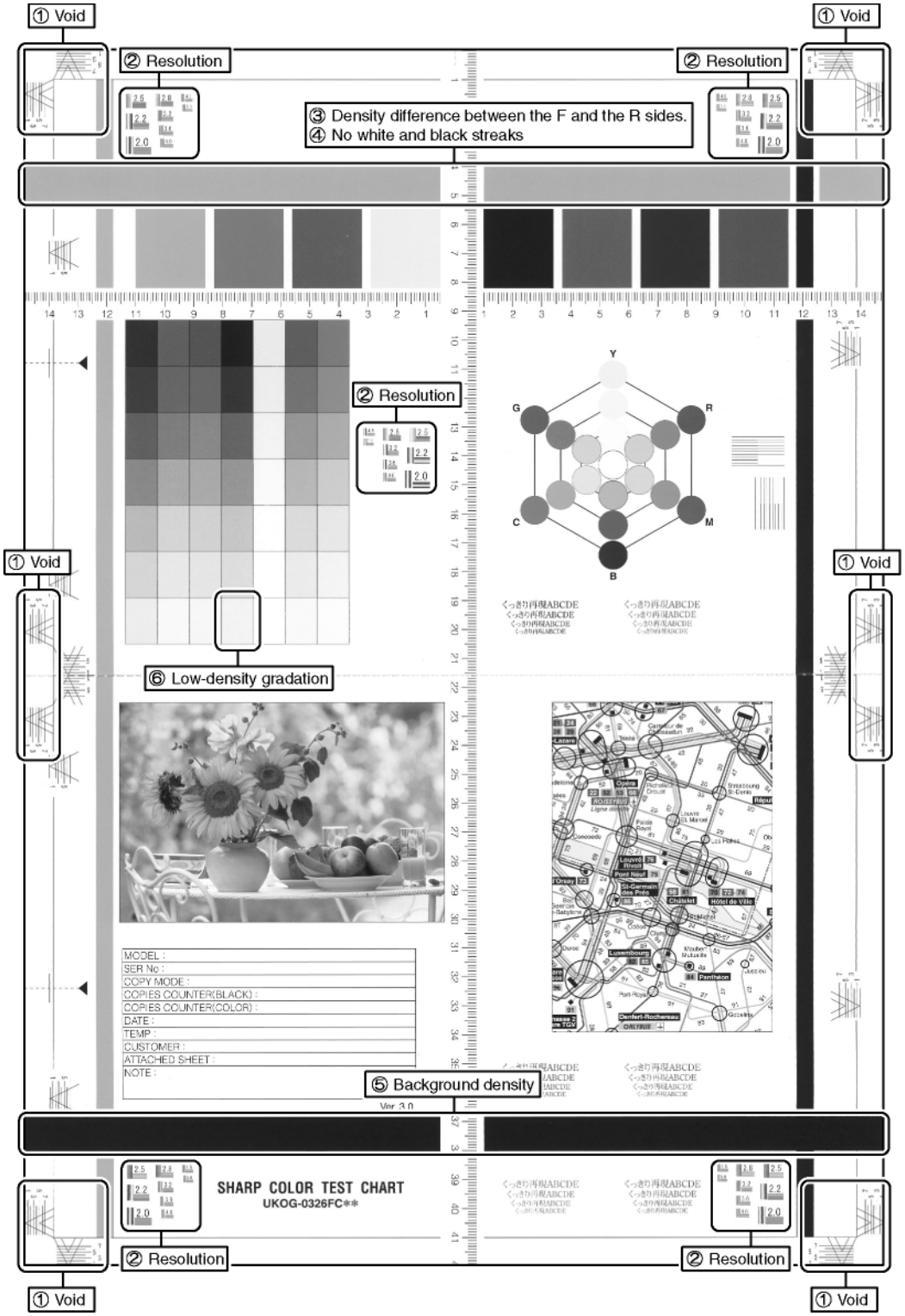
a. Color copy check items (Check to confirm the following:)

1) There are 12 void areas.
2) Registrations (one point for the main scanning, and one point for the sub scanning) are not shifted.
3) The resolution of 5.0 (5 points) can be seen.
4) The color difference in gray balance between the F and the R sides is not so great.
5) There are no white and black streaks.
6) Color texts are clearly reproduced.
7) The background density is not so light.



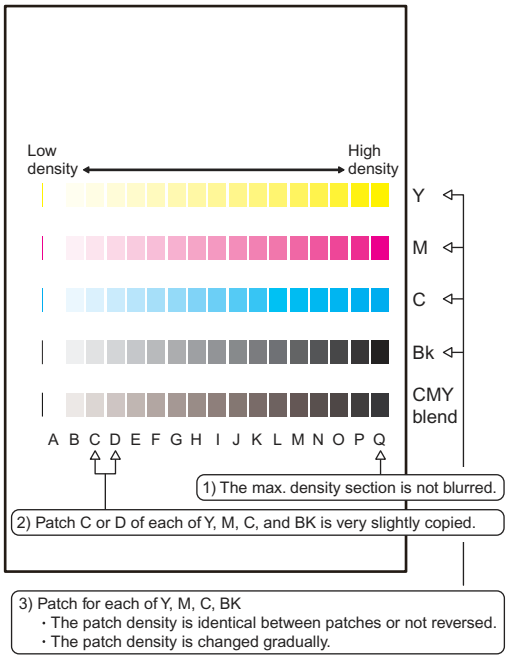
b. Monochrome copy check items (Check to confirm the following:)

1) There are 12 void areas.
2) The resolution of 4.0 (5 points) can be seen.
3) The density difference between the F and the R sides is not so great.
4) There are no white and black streaks.
5) The background density is not so light.
6) The black low-density gradation is copied slightly.



Method 2

Use SIM46-21 to print the colo r balance adjustment sheet, and check each process (CMY) black patch color balance and the black patch in order to confirm that the co lor balance adjustment is proper.


Low density
High density
Y
M
C
Bk
CMY blend
A B C D E F G H I J K L M N O P Q
1) The max. density section is not blurred.
2) Patch C or D of each of Y, M, C, and BK is very slightly copied.
3) Patch for each of Y, M, C, BK
・The patch density is identical between patches or not reversed.
・The patch density is changed gradually.

If the color balance of each patch of the process black (CMY mixed color) is slightly shifted to Magenta, it means that the adjustment is proper. If the color balance of the adjustment pattern printed in this mode is slightly sh ifted to Magenta, it is converted into the natural gray color balance by the color table in an actual cop y mode. (When the color balance target is DEF 1.)

If color balance or density is not satisfied, adjust the copy and printer color balance by SIM 46-74.

(3) Printer color balance/density check

Note

Before checking the printer color balance and the density, be sure to execute the following procedures in advance.

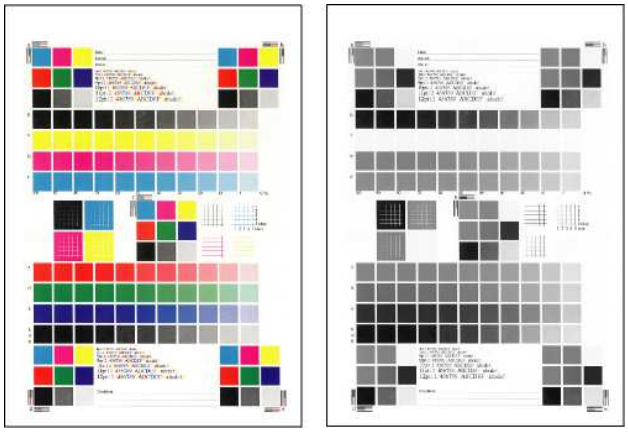
* Execute the high density imag e correction (Process corr ection) forcibly. (SIM 44-6)
* The half-tone image correction is forcibly executed. (SIM 44-26)

Method 1

Execute SIM 64-5 to print the print test pattern.

Important

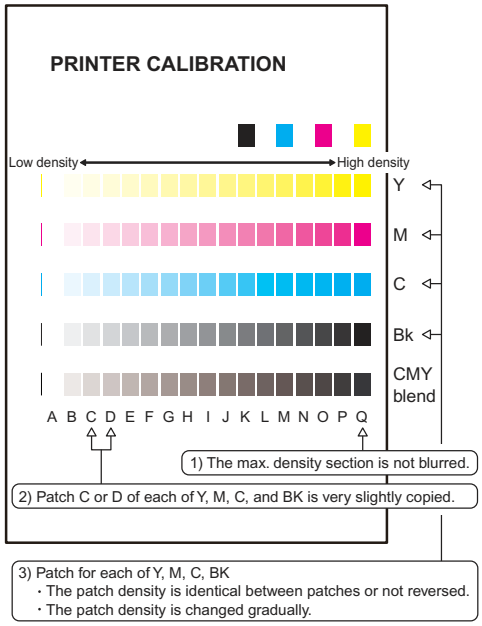
Set each set value to the defa ult and press [EXECUTE] key. The print test pattern is printed.



The print density must be changed gradually from the lighter level to the darker level. The density changing direction must not be reversed. The density level of ea ch color must be almost at the same level.

Method 2

Use SIM 67-25 to p rint the color b alance adjustment she et and compare each process (CMY) black patch color balance and the black patch to check the color balance.


PRINTER CALIBRATION
Low density
High density
Y
M
C
Bk
CMY blend
A B C D E F G H I J K L M N O P Q
1) The max. density section is not blurred.
2) Patch C or D of each of Y, M, C, and BK is very slightly copied.
3) Patch for each of Y, M, C, BK
・The patch density is identical between patches or not reversed.
・The patch density is changed gradually.

The print density must be changed gradually from the lighter level to the darker level. The density changing direction must not be reversed.

The density level of each color must be almost at the same level.

Patch B may not be copied.

Patch A must not be copied.

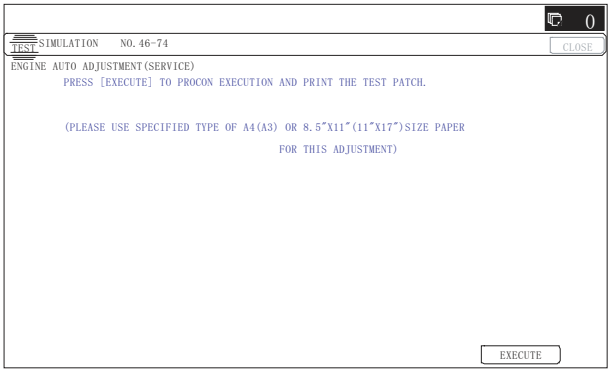
If the color balance of each patch of the process black (CMY mixed color) is slightly shifted to Magenta, it means that the adjustment is proper. In an actual print mode, it is converted into the natural gray color balance by the color table. (When the color balance target is DEF 1.)

(4) Copy/Printer color balance and density adjustment (Automatic adjustment)

Important

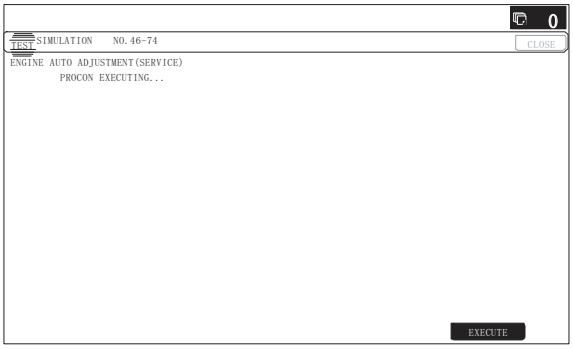
When a printer option is installed, be sure to execute the above item.

1) Enter the SIM46-74 mode.


SIMULATION NO. 46-74
CLOSE
ENGINE AUTO ADJUSTMENT(SERVICE)
PRESS [EXECUTE] TO PROCON EXECUTION AND PRINT THE TEST PATCH.
(PLEASE USE SPECIFIED TYPE OF A4(A3) OR 8.5"X11"(11"X17")SIZE PAPER
FOR THIS ADJUSTMENT)
EXECUTE

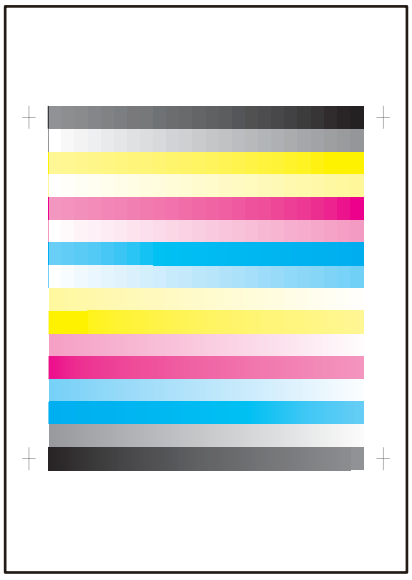
2) Press [EXECUTE] key.

The high density process control is performed, and the copy color patch image (adjustment pattern) is printed out. (A4/11" x 8.5" or A3/11" x 17" paper is automatically selected.)



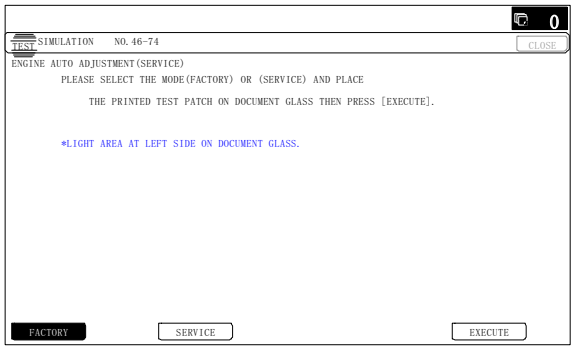
3) Set the color patch image (adjustment pattern) paper printed in procedure 2) on the document table.

Set the color patch image (adjustment pattern) printed in the procedure 2) on the document table. Place the color patch image so that the fine lines are on the left side. At that time, place 5 sheets of white paper on the printed color patch image (adjustment pattern).



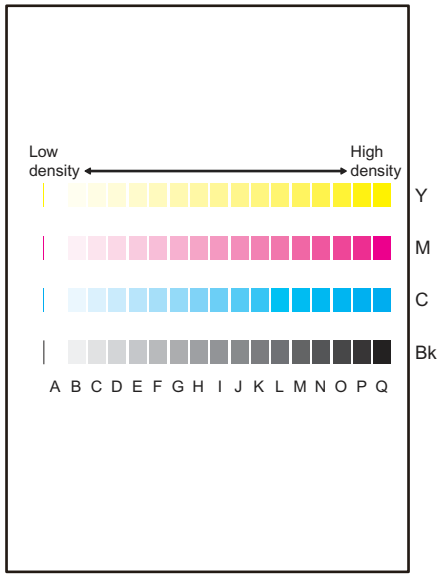
4) Select [FACTORY] target, and press [EXECUTE] key.

When the color balance is customized by the manual color balance adjustment (SIM 46-21) according to the user's request, and the color balance is registered with SIM63-7 as the service target, if the color balance is required to be adjusted, select the [SERVICE] target.


SIMULATION NO. 46-74
CLOSE
ENGINE AUTO ADJUSTMENT(SERVICE)
PLEASE SELECT THE MODE(FACTORY) OR (SERVICE) AND PLACE
THE PRINTED TEST PATCH ON DOCUMENT GLASS THEN PRESS [EXECUTE].
*LIGHT AREA AT LEFT SIDE ON DOCUMENT GLASS.
FACTORY
SERVICE
EXECUTE

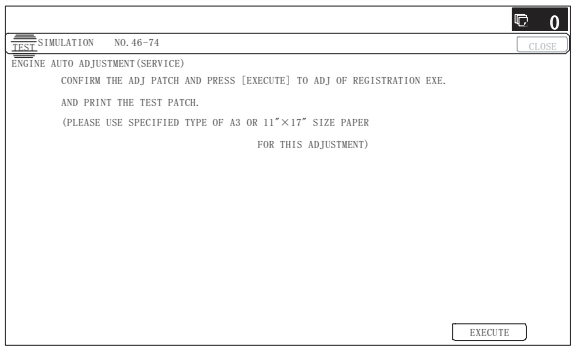
The copy color balance adjustment is automatically executed and prints the color balance check patch image.

If there is any streak or unclear print on the printed check pattern, check the print engine for any problems.



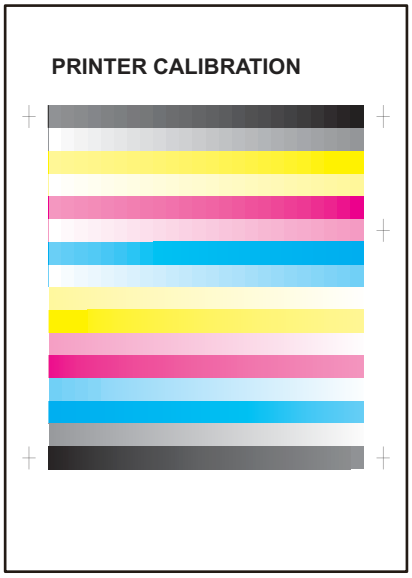
5) Press [EXECUTE] key.

The printer color patch image (adjustment pattern) is printed out. (A4/11" x 8.5" or A3/11" x 17" paper is automatically selected.)


SIMULATION NO. 46-74
CLOSE
ENGINE AUTO ADJUSTMENT(SERVICE)
CONFIRM THE ADJ PATCH AND PRESS [EXECUTE] TO ADJ OF REGISTRATION EXE.
AND PRINT THE TEST PATCH.
(PLEASE USE SPECIFIED TYPE OF A3 OR 11"×17" SIZE PAPER
FOR THIS ADJUSTMENT)
EXECUTE

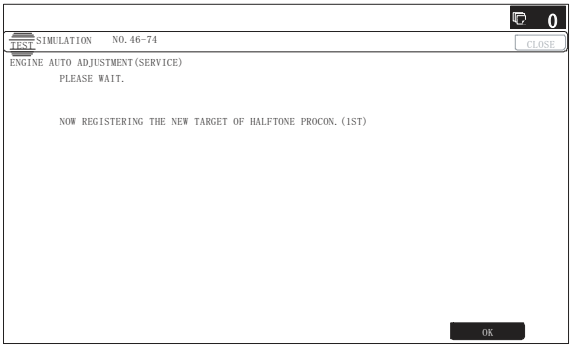
6) Set the color p atch image (adjustment p attern) printed in the procedure 5) on the document table.

Set the color p atch image (adjustment p attern) printed in the procedure 2) on the do cument table. Place the color p atch image so that the fine lines are on the lef t side. At that time, place 5 sheets of white paper on the printed color patch image (adjustment pattern).



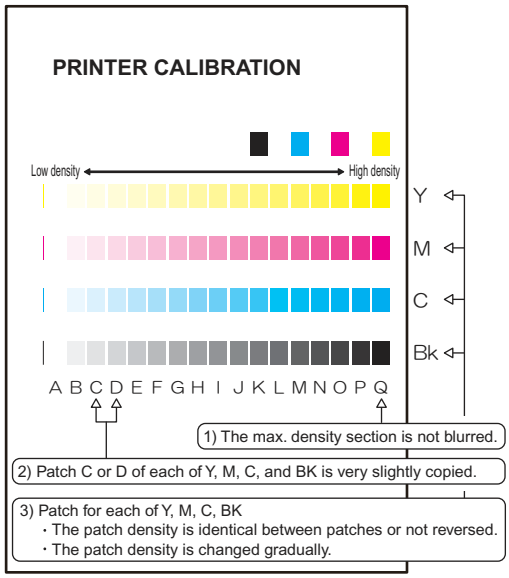
7) Select [FACTORY] target, and press [EXECUTE] key.

When the color ba lance is custo mized with the manual color balance adjustment (SIM 67-25) according to the user's request and the color balance is registered as the ser vice target with SIM 67-27, if the color balance is adjusted to that color balance, select the [SERVICE] target.



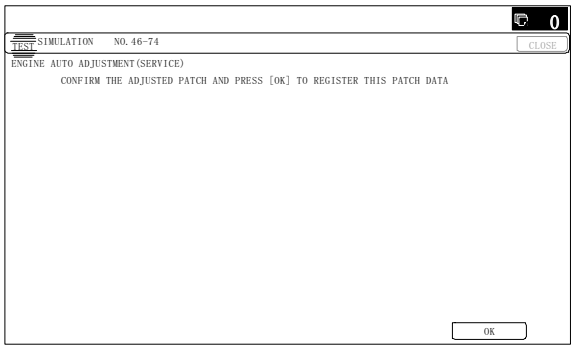
The printer color ba lance adjustment (step 1) is au tomatically performed and the color balance check patch image is printed out.

If there is any streak or unclear print on the printed check pattern, check the print engine for any problems.


PRINTER CALIBRATION
Low density
High density
Y
M
C
Bk
A B C D E F G H I J K L M N O P Q
1) The max. density section is not blurred.
2) Patch C or D of each of Y, M, C, and BK is very slightly copied.
3) Patch for each of Y, M, C, BK
・The patch density is identical between patches or not reversed.
・The patch density is changed gradually.

8) The initial setting menu of the half tone image correction is displayed. Press [OK] key.

The initial setting of the half tone image correction is performed.

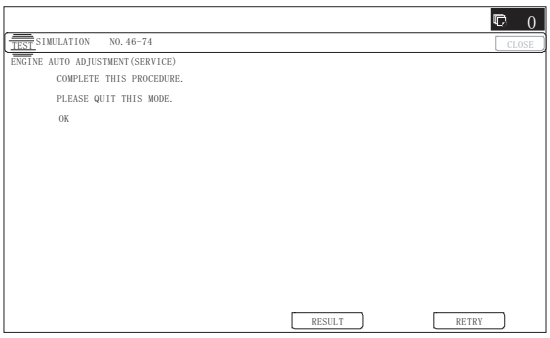


9) Wait until [EXECUTE] key is displayed. When it is displayed, press it.

The half tone image correction is performed.

10) When "COMPLETED T HIS PROCEDURE" is displayed , the adjustment operation is completed.

Cancel SIM46-74.



Important

The adjustment result becomes valid only when the both adjustments in the copy mode and in the printer mode are completed.

For example, if the copy color balance adjustment (automatic adjustment) is performed and the simulation is canceled, the adjustment result is invalid.

11) Check the copy color balance and density.

(Refer to the item of the copy co lor balance and den sity check.)

When satisfactory color balance and density are not obtained from the automatic adjustment by selecting the factory target in procedure 4), change the factory color balance target with SIM 63-11 and repeat the procedures from 1).

If a satisfacto ry result is not obtained with the above procedure, perform the manual color balance adjustment (ADJ 10C (2)).

Also when the service target is selected in procedure 4) to execute the automatic adjustment and a satisfactory result is not obtained, perform the manual color balance adjustment (ADJ 10C (2)).

12) Check the printer color balance and density.

(Refer to the item of the printer color balance and density check.)

When satisfactory color balance and density are not obtained from the automatic adjustment by selecting the factory target in procedure 7), change the factory color balance target with SIM 67-26 and repeat the procedures from 1).

If a satisfactory result on the color ba lance and the density is not obtained with the automatic adjustment, execute the manual adjustment (SIM 67-25) (ADJ 10E (2)).

Also when the service target is selected in procedure 7) to execute the automatic adjustment and a satisfactory result is not obtained, perform the manual color balance adjustment (ADJ 10E (2)).

If the color balance or density is not in the satisfactor y level even after execution of the automatic and man ual adjustments, there may be another cause.

Troubleshoot the cause, rep air or perform necessary works, and repeat the adjustment from the beginning.

If color balance or density is not satisfied, adjust the copy and printer color balance by SIM 46-74.